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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,313

09/21/2006

Thomas Friedlaender

30071/41841

3782

4743

7590

09/29/2008

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EXAMINER

TISCHLER, FRANCES

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

09/29/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,313	<b>Applicant(s)</b> FRIEDLAENDER ET AL.	
	<b>Examiner</b> Frances Tischler	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 11-13 is/are pending in the application.  
     4a) Of the above claim(s) 8-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 11-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) 1-13 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/11/06, 8/2/07, 6/4/08</u>                                   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I, claims 1 – 7 and 11 – 13 in the reply filed on 8/18/08 is acknowledged.

### ***Claim Objections***

2. Claims 1 and 4 – 6 are objected to because of the following informalities: Claims cannot not refer to the reference numbers used in figures, such as 101, 201, etc.
3. Claim 6 is objected to because of the following informalities: Claim 6, which reads “ using a pneumatic table is used”, is grammatically incorrect.
4. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1, 2, 6, 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson et al (US 6,376,563).**

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7. Robinson discloses (abstract, figure 1A) a method of reprocessing used PET beverage bottles where the bottles are shredded into flakes and chunks, reading into applicant's claim 1a). The flakes are derived from the thin wall portion of the bottles while the chunks are derived from the thick neck portion of the bottles (6:24 – 31). The shredded material is subjected to a floatation segregation process, which separates foreign plastic flakes, such as polyethylene or polypropylene plastic flakes, that may be present from the PET flakes by bulk density techniques (6:31 – 38), reading on applicant's claim 1b) and claim 2. The PET flakes and chunks are then subjected to a wash cycle within a caustic solution to remove other impurities, subjected to another floatation segregation to remove those impurities and then dried (6:39 – 62), reading on applicant's claim 1c) and claim 11 of industrial treatment and decontamination treatment.

8. The thick and denser chunk portion/neck of the shredded bottles and the thin flake portion/wall of the shredded bottles are separated with a Forsberg Destoner ([www. Forsbergs.com](http://www.Forsbergs.com)), which works upon vibrational and fluidization, air classifier, principles whereby separation occurs between the more and the less dense materials (8:24 – 51), reading on applicant's claims 6 and 7.

**9. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Erden et al (US 6,288,131).**

10. Van Erden discloses (abstract, figure 1A) a method of reprocessing used PET beverage bottles where the bottles are shredded into flakes and chunks,

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reading into applicant's claim 1a). The flakes are derived from the thin wall portion of the bottles while the chunks are derived from the thick neck portion of the bottles (5:36 – 40). The chopped material is subjected to a floatation segregation process, which separates foreign plastic flakes, such as polyethylene or polypropylene plastic flakes, that may be present from the PET flakes by bulk density techniques (5:40 – 47), reading on applicant's claim 1b) and claim 2. The PET wall flakes and the neck chunks are then passed through a pair of flattening rolls, which permit the wall flake portion to pass through the nip of the flattening rolls undisturbed while flattening the neck chunk portions. Van Erden discloses that said process alters the chunk portions to resemble the wall flake portions (6:58 – 63), which is equivalent to applicant's claim 4 of re-shredding of the thick walled parts since in both cases the thick walled portions are made smaller to resemble the thin walled portion. Afterwards, the combined thin and flattened flakes are further processed by air blasting, by heating and by solid state polymerization, reading on applicants' reprocessing treatment of claim 1c).

### ***Claim Rejections - 35 USC § 102/103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**7. Claims 3, 12 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Robinson et al (US 6,376,563).**

14. Robinson's disclosure is discussed above and is incorporated herein by reference.

15. Robinson is silent on the percentage of thick and thin materials that are separated, as claimed by applicant in claims 3, 12 and 13. However, since Robinson uses the same technique of separating the thick and thin particles of PET bottles as claimed applicant, it can be assumed that the % separation achieved is inherently the same as claimed by applicant. Alternatively, the pneumatic table/destoner can also be optimized (through vibration strength, air flow rate and strength, process duration, etc.) until the desired % separation is achieved. The case law has held that "A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. In re Antonie,

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559 F.2d618, 195 USPQ 6 (CCPA 1977). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have varied the pneumatic table/destoner settings as necessary through routine optimization to obtain the desired % separation between the thin and thick particles.

**16. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al (US 6,376,563) in view of Van Erden et al (US 6,288,131).**

16. Robinson's and Van Erden's disclosure is discussed above and is incorporated herein by reference.

17. Robinson discards the thick walled/neck particles of PET, the reason for which being that these non-crystalline particles react slowly, if at all, within the solid state polymerization process in connection with building up the intrinsic viscosity of the materials being processed. They also form clumps upon heating and jam the feeder or other components of the apparatus (7:64 – end, 8:1 – 31). Van Erden discloses the same method of reprocessing used PET bottles but flattens the thick walled particles to the size and shape of the thin walled particles for the same purpose of having them behave like the thin walled flakes for the purpose of solid state polymerization (6:58 – end, 7:1 – 11). Therefore, it would have been obvious to one of ordinary skill in the art to have replaced Robinson's method of discarding the thick walled particles with Van Erden's method of flattening them to resemble the thin walled particles for the same purpose of having particles of uniform size and density to go through solid state

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polymerization by reacting well and timely and not causing side effect such as clumping or clogging of the apparatus being used for the solid stating.

### ***Conclusion***

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frances Tischler whose telephone number is (571)270-5458. The examiner can normally be reached on Monday-Friday 7:30AM - 5:00 PM; off every other Friday.

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seileck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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/ Irina S. Zemel/  
Primary Examiner, Art Unit 1796

Frances Tischler  
Examiner  
Art Unit 1796

/FT/